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Washington, DC 20460

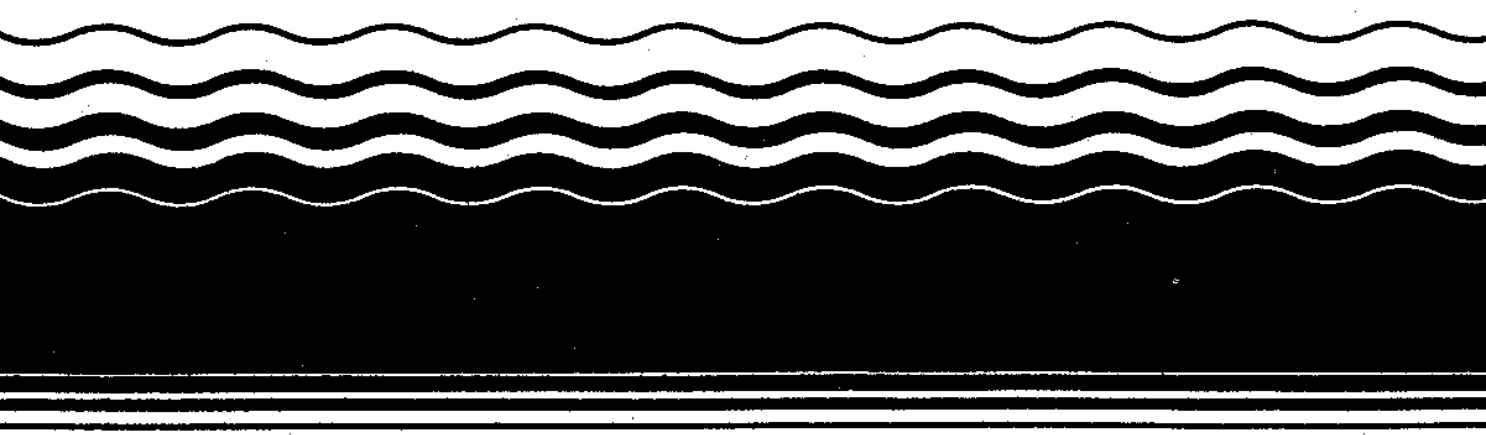
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Superfund



# **Guidance for Data Useability in Risk Assessment (Part B)**

## **Final**



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## **Final**

Notice: This is a supplement to Guidance  
for Data Useability in Risk Assessment -  
Part A

Office of Emergency and Remedial Response  
U.S. Environmental Protection Agency  
Washington, DC 20460

## NOTICE

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## **Tips\***

- *A health physicist or radiochemist should work with the risk assessor from the beginning of the remedial investigation process. (page 1)*
- *Field measurements must be made using instruments sensitive to the type of radioactivity present. (page 13)*
- *The shipper of radioactive material is responsible for ensuring that the recipient is authorized to receive the shipped material and for compliance with all applicable shipping and labelling regulations. (page 25)*

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\* For further information, refer to the text. Page numbers are provided.





# PREFACE

This document is the second part (Part B) of the two-part *Guidance for Data Useability in Risk Assessment*. Part A, developed by the EPA Data Useability Workgroup, provides guidance on the analytical data quality and useability requirements needed for the cleanup of hazardous waste sites under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). Part B provides supplemental guidance to Part A on planning and assessing radioanalytical data needs for the baseline human health risk assessment conducted as part of the remedial investigation (RI) process at sites containing radioactive substances. Part B is not a stand-alone document, and at all times it must be used in conjunction with Part A.

This guidance is addressed primarily to the remedial project managers (RPMs) who have the principal responsibility for leading the data collection and assessment activities that support the human health risk assessment. It also should be of use to risk assessors who must effectively communicate their data needs to the RPMs and use the data provided to them. Because

of the special hazards and unique sampling and analysis considerations associated with radioactive substances, RPMs and risk assessors are strongly encouraged to consult with a health physicist, radiochemist, or both, starting at the beginning of the RI planning process. For reference, a list of the EPA Headquarters, Regional and Laboratory radiation program staff is provided in the Appendices.

Comments on the guidance should be sent to:

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401 M Street, SW (OS-230)  
Washington, DC 20460  
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Or to:

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# Chapter 1

## Introduction and Background

This guidance provides supplemental information regarding the useability of analytical data for performing a baseline risk assessment at sites contaminated with radioactivity. The reader should be familiar with the guidance provided in *Guidance for Data Useability in Risk Assessment - Part A* before proceeding with this document. Although Part A focuses primarily on chemical contamination, much of the information presented also applies to the risk assessment process for radioactive contamination. The guidance offered in this document is intended as an overview of the key differences between chemical and radionuclide risk assessments, and not as a comprehensive, stand-alone document to assess the risks posed by radionuclide exposures. Part A of this guidance should be used side by side with this document because of the many references to information and exhibits found in Part A.

➤ *A health physicist or radiochemist should work with the risk assessor from the beginning of the remedial investigation process.*

There are special hazards and problems associated with radioactivity contamination. Accordingly, it is recommended that a professional experienced in radiation protection and measurement (health physicist or radiochemist) be involved in all aspects of the risk assessment process from the beginning of the remedial investigation/feasibility study.

Additional information on important aspects of radiation protection and measurement is provided in the appendices. These appendices are included to provide greater detail on topics presented in this guidance and to

facilitate a comprehensive understanding for the interested reader. Appendix I is a glossary of terms that apply to radioactivity. Appendix II is a discussion on naturally occurring radionuclides and their presence in the environment. Appendix III provides a list of the names and addresses of the EPA Regional, Laboratory, and Headquarters Radiation Program staff for health physics and radioanalytical support.

### 1.1 CRITICAL DATA QUALITY ISSUES IN RISK ASSESSMENT

The five basic environmental quality issues discussed in Part A Section 1.1 also apply to radioactive contamination. Specifics for data sources, detection limits, qualified data, background samples, and consistency in sample collection will be discussed later in this guidance.

### 1.2 FRAMEWORK AND ORGANIZATION OF THE GUIDANCE

This document is organized the same as Part A. Part A, Exhibit 2 describes the organization of this document. The assessment of radioanalytical data as opposed to chemical data is emphasized.

This guidance discusses the data collection and evaluation issues that affect the quality and useability of radioanalytical data for baseline human health risk assessments. Part A, Exhibit 3 lists the four components of the risk assessment process and the information sought in each of the components.

